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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/286,794

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MARK E. BAER

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EXAMINER

BLOUNT, STEVEN

ART UNIT

PAPER NUMBER

2661

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/286,794

Applicant(s)

BAER ET AL.

Examiner

Steven Blount

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 52, 55 - 56, 58 - 59, 61 - 67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 52, 55 - 56, 58 - 59, 61 - 62, and 67 is/are rejected.
- 7) ☒ Claim(s) 63-66 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 52 and 55 – 56 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claim 52, lines 12 – 13, the phrase “installing a threaded nut...into abutment with the fan impeller” lacks support in the specification.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 58 – 59 and 62, and 67 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent 3,665,758 to Tiller in view of U.S. patent 4,147,470 to Brooks et al.

With regard to claim 58, Tiller teaches motor shaft 67/71 with threaded (non-circular) surface geometry with fan impeller 111 installed proximate the first end (see

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numeral 71) with first washer 99/95 (col 3, lines 16+) on the first fan side; shaft extension 39 with a second, threaded surface geometry (to mate with surface 71) coupled to assembly (load cell) 21. Tillis does not, however, teach a second washer disposed on a side of the fan impeller that is toward the first end of the motor shaft, though Tiller does teach in figure 3 nut 75 in direct contact with impeller 111.

Brooks et al teach having a pair of washers straddling and protecting impeller 12. See figures 1 and 2.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have placed a washer below the nut 75 and above impeller 121 in Tiller, in light of the teachings of Brooks et al, in order to prevent the nut from injuring the impeller when it is tightened onto the impeller.

With regard to claim 59, note the discussion of nut 75 above.

With regard to claim 62, note the discussion above, as well as the following:

Tiller

Motor shaft with threaded periphery 71 (fig 3);

Placing first washer onto motor shaft 99/105

Installing fan impeller 117;

Installing threaded nut 75;

Engaging shaft extension 59;

Lower assembly 21.

Brooks

Placing second washer 53 over first end of motor shaft.

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With regard to claim 67, see bearing 33 in Tiller.

5. Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 4,709,794 to Lengsfeld et al.

Lengsfeld teaches (figure 1) motor shaft 8 (col 2, line 57) with a first end (near 32) having a recessed-threaded surface geometry of non-circular disposition. The examiner notes that a threaded screw has a non-circular cross section in view of the fact that the threads, in forming the helical perimeter, skew the circular shape at least a small amount.

Lengsfeld et al also teach fan impeller 5 installed on the motor shaft nearly proximate the first end of the motor shaft. Lengsfeld also teach shaft extension 32 to be installed inside shaft 8 and that shaft extension 32 has a threaded, non-circular surface geometry coupled to the first end of the motor shaft, with nut 33 "rotatably connected" to the said shaft extension, and "screwed onto the thread stem 32" (col 3, line 35). Lengsfeld also teach lower a "lower" assembly (drive shaft 38, bearings 41, 42, etc) coupled to the shaft extension.

The examiner notes that although the motor shaft is "nearly proximate" the first end of the shaft and not exactly "proximate" it, this difference in location is an obvious variation which would have been obvious to one of ordinary skill in the art at the time of the invention.

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6. Claims 63, 64, 65, and 66 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form to include the limitations of the base claim and any intervening claims.

REMARKS

7. Claim 52 (and dependent claims 55 and 56) has been rejected under 35 USC 112 first paragraph because there is no support for tightening a threaded nut onto the motor shaft into abutment with the fan impeller. The only figures which show a threaded nut are 4 and 5, and in these embodiments, the threaded nut is in contact with washer 120 such that the nut does not "abut" the fan impeller 45. It is noted that the definition of abut includes "1. To *touch* along a border or with a projecting part. 2. To terminate at a point of *contact*" (emphasis added; Merriam Websters Collegiate Dictionary, Tenth edition, 1997).

The examiner is willing to conduct a second interview, if the applicant feels that this would further prosecution.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Blount whose telephone number is 571-272-3071. The examiner can normally be reached on M-F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Chau Nguyen, can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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TECHNOLOGY CENTER 2600

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4/27/05